

**Amendments to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. – 4. (cancelled)
5. (previously presented) A method for preparing a microarray having a hydrophobic barrier defining a plurality of subarrays on the microarray, the microarray constructed by a microarray synthesis instrument, the method comprising the steps of:
  - a) selecting at least one probe set comprising probes of interest;
  - b) synthesizing the probe sets on a microarray slide to provide the plurality of subarrays using the micorarray synthesis instrument;
  - c) depositing between each of the subarrays a hydrophobic group-bearing phosphoramidite to provide a hydrophobic barrier which surrounds each subarray also using the microarray synthesis instrument; and
  - d) inhibiting fluid communication between each of the subarrays on the microarray.
6. (original) The method of Claim 5 wherein hydrophobic barrier is synthesized using a hydrophobic group-bearing phosphoramidite.
7. (original) The method of Claim 6 wherein the phosphoramidite is a trityl protected phosphoramidite.
8. (cancelled)

9. (previously presented) A method for preparing a microarray having a hydrophobic barrier defining a plurality of subarrays on the microarray, wherein the substrate containing the microarray is held in the identical position by an instrument throughout the method, the method comprising the steps of:

- a) selecting at least one probe set comprising probes of interest;
- b) synthesizing the probe sets on a microarray slide to provide the plurality of subarrays; and
- c) depositing between each of the subarrays a hydrophobic group-bearing phosphoramidite to provide a hydrophobic barrier which surrounds each subarray using the same instrument used to synthesize the probe sets.

10. (previously presented) The method of Claim 9 wherein hydrophobic barrier is synthesized using a hydrophobic group-bearing phosphoramidite.

11. (previously presented) The method of Claim 10 wherein the phosphoramidite is a trityl protected phosphoramidite.